

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 - 14. (canceled)

15. (original) A system for dissipating heat from a semiconductor device, comprising:

a thermally conductive lid, comprising at least ~~one cavity~~ two cavities corresponding to at least ~~one die~~ two dies mounted on a substrate, the first die having a first thickness and the second die having a different second thickness; and

a conductive [layer] material deposited in the at least ~~one cavity~~ two cavities and having a melting point greater than the maximum operating temperature of the semiconductor device, the conductive layer operable to substantially fill a the space between the ~~at least one cavity~~ cavities and the ~~at least one die~~ dies when the lid is coupled to the substrate to form a conductive layer so the thickness of the first die and the conductive layer on top of the first die is substantially equal the thickness of the second die and the conductive layer on top of the second die.

16. (currently amended) The system of Claim 15, wherein the conductive layer is further operable to assume a liquid state when heated, the liquid state operable to distribute the conductive layer within the space between the ~~at least one cavity~~ cavities and the ~~at least one die~~ dies when the lid is coupled to the substrate.

17. (original) The system of Claim 15, wherein the conductive layer is a eutectic solder.

18. (original) The system of Claim 15, wherein the conductive layer is a lead-tin solder.

19. (original) The system of Claim 15, wherein the conductive layer is an indium-based solder.

20. (original) The system of Claim 15, wherein the conductive layer is a silver-filled epoxy.
21. (original) The system of Claim 15, wherein the conductive layer is an epoxy having a thermal conductivity greater than 10 W/m-°C.
22. (currently amended) The system of Claim 15, wherein ~~the at least one cavity corresponds to at least two dies mounted on the substrate, the~~ at least two dies are operable to fit inside [the at least] one cavity when the lid is coupled to the substrate.
- 23 - 24. (canceled)
25. (currently amended) A system comprising:
a semiconductor die having a bottom surface and a top surface;
a lid with a cavity having an inner surface, accommodating the semiconductor die; and
a heat conducting ~~element~~ layer having a thermal conductivity greater than 10 W/m-°C adhering to the inner surface of the cavity and substantially conforming to the surface contour of the top surface of the chip and contacting without adhering to the top surface of the chip.
26. (currently amended) The system of claim 25, in which the heat conducting ~~element~~ layer contacts an edge of the die.
27. (previously presented) The system of claim 25, in which the lid has two or more cavities that accommodate two or more dies.
28. (currently amended) The system of claim 25, further comprising a glue layer with which a substrate to which the lid with the conductive layer is the bonded to the die is adhered.
28. (new) The system of claim 25, further comprising a substrate to which the lid is adhered.
29. (previously presented) The system of claim 25, in which the heat conductive material is a solder material.

30. (previously presented) The system of claim 29, in which the solder material comprises lead.
31. (previously presented) The system of claim 29, in which the solder material is substantially free of lead.
32. (currently amended) The system of claim 25, in which the heat conductivity of ~~the material~~ conducting layer is a thermoplastic material.
33. (previously presented) The system of claim 25, in which the thermal conductivity of the heat conductive material is higher than the thermal conductivity of epoxies.
34. (currently amended) The system of claim 27, in which the heat conductive ~~material~~ layer in the cavities varies in thickness to compensate for any variation in die-thickness.
35. (canceled)